

Commonwealth of Virginia

Electronic Government Implementation Division

Seat Management Section

Model for Conducting TCO Evaluations in Small Agencies

**Using the Gartner TCO Manager Software
and Model for Distributed Computing Environments
Version 4.5.3**

October 3, 2001

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MODEL SCOPE

This model, the assumptions contained in the model, and the corresponding worksheets are structured to meet the TCO processes and data collection requirements for small agencies (defined as less than 115 authorized positions in the Appropriation Act).

DATA COLLECTION ASSUMPTIONS

The following assumptions, procedures, and clarifications are considered normal operating procedures for the Seat Management Section when conducting TCO evaluations for small agencies using the Gartner TCO Manager software for Distributed Computing Environments (version 4.5.3).

COMPANY PROFILE

- **Revenue**

Use the total (all sources of funds) budget amount from the Appropriation Act for the fiscal year that covers the largest part of the evaluation period. When entering this information in the Company Profile round the amount in the “revenue field” to the next highest million.

- **Evaluation Report Period**

The evaluation study period should encompass a one-year period consisting of the most recent completed 12 months.

- **Average Number of Hours Worked Per Year Per Employee**

The Gartner software default for this information is 1,880 hours per year. State agencies and institutions of higher education should use 1,800 hours per year. The “1,800” was arrived at as follows:

- 52 wks per year times 5 workdays per week = 260 possible workdays per year
- Assumptions for days not normally worked
 - o Average employee gets 12 days vacation year
 - o Average employee gets 5 personal days per year
 - o Average employee takes 5 sick days per year
 - o Average employee gets 13 paid holidays

Average days off per year = 35

- Work hours per year: (260 days – 35 days) times 8 hours per day = 1,800

Variations from the 1,800 hours per year and detailed reasons for the variation should be documented as part of the TCO Evaluation Report.

- **End user burden rate**

The average end user burden rate (benefits, etc.) for Commonwealth full time employees is 28%. Variations from this rate and detailed reasons for the variation should be documented as part of the TCO Evaluation Report. Primary reasons for variation from this norm include employee health care options selected and increased retirement benefits associated with law enforcement staff.

- **IS staff burden rate**

The average end user burden rate (benefits, etc.) for Commonwealth full time IS employees is 28%. Variations from this rate and detailed reasons for the variation should be documented as part of the TCO Evaluation Report. Primary reasons for variation from this norm include employee health care options selected and IS employees that travel extensively as part of their job (travel costs are added to the normal burden rate for IS staff in the Gartner model).

- **Location**

Northern Virginia business location should be “Northeast USA”, all other areas of Virginia should use a business location of “Southeast USA”

- **Futz Factor**

Gartner is removing this cost category from future releases of the software, and as such, the “futz factor” is considered out of scope.

CURRENT ASSETS

- **Hardware and Software Costs**

Asset counts (servers, client computers, network devices, peripherals) for the evaluation period will be as of the last day of the evaluation period.

CURRENT EXPENSES

- **Hardware and Software Costs**

Hardware and software costs are normally expensed in the year they are purchased. However, for the purposes of establishing TCO metrics that remove procurement peaks and valleys, hardware and software costs are distributed over their Gartner recommended useful life. The following rules are used to distribute costs for hardware and software contained in the agency's current inventory.

- Desktop computers and software – purchase costs are expensed over three (3) years.
- Portable computers and software – purchase costs are expensed over two (2) years.
- Servers and software – purchase costs are expensed over five (5) years.
- Peripherals - purchase costs are expensed over three (3) years.
- Network Devices - purchase costs are expensed over three (3) years.
- Hardware and software that are more than Gartner's recommended useful life of the asset at the beginning of the evaluation period are counted as assets with a cost of \$0.00.

Items that are acquired or that reach the end of their Gartner recommended useful life during the reporting period for an evaluation should be prorated accordingly.

Lease costs for a reporting period are expensed, not prorated.

Seat management services costs should be broken into appropriate hardware and services components and expensed.

OPERATIONS EXPENSES

- **Allocation of Staff in the IS Cost Categories**

Most small agencies do not have dedicated in-house staff. If an agency has a small in-house staff, or if that agency contracts for IS staff support for their distributed computing environment, detailed work or timesheet information by activity performed is not usually maintained.

Perform the following steps:

- determine the cost of the staff used to support operations (IS staff, contractors, or user staff) **USE WORKSHEET 2 – ADMINISTRATION AND OPERATIONS**
- the cost should be entered into the appropriate cost category in the “STAFFING INFORMATION” or “OUTSOURCED FEES” cost categories and the evaluation must use the Gartner defaults to spread the cost among the corresponding activities.
- Unless detailed records and/or help desk records are maintained by an agency, the “USER SUPPORT ACTIVITIES, SERVICE DESK METRICS, COMMON SERVICE DESK CALLS, and DISPATCHED SUPPORT CALLS” must be considered out of scope (leave blank) for an evaluation.

Note – the evaluation report should reflect the fact that these records are not maintained and the corresponding information is considered out of scope for the report.

ADMINISTRATION EXPENSES

In the Current Expenses - Administration section, information about an organization's finance and administration, IS training, and end user training is collected and compiled. The information is used to calculate the Administration component of the Actual TCO. The Gartner model was developed for large organizations and assumes the cost information for this major cost category is either outsourced or included as overhead in the IS organization.

- **USE WORKSHEET 2 – ADMINISTRATION AND OPERATIONS**
- **Finance and Administration, IS Training, End User Training**

In small organizations, these functions are normally performed by management staff outside the IS department and in many cases by only a few people. Determine the cost of staff or the outsourced fees that were incurred to accomplish the Finance and Administration, IS Training, and End User Training functions. Enter those costs in the appropriate cost category in the software package. Use the Gartner allocation defaults for spreading the cost across activities.

END USER CALCULATIONS

- **End User Count (USE WORKSHEET 3 – END USER AVERAGE SALARY CALCULATIONS)**

The count of the number of end users for the evaluation period will be as of the last day of the evaluation period. All contractors and hourly employees must be converted to full-time-equivalent (FTE) employees. The number of end users is equal to the number of FTEs calculated using the worksheet.

- **End User Average Salary Calculations (USE WORKSHEET 3)**

An end user average salary calculations worksheet has been developed to ensure that an accurate and consistent unburdened end user average salary is calculated. The Gartner TCO Manager software adds the end user burden rate to this number when it calculates end user operations and downtime costs. For Virginia state government purposes the 28% burden rate is only applicable to classified employees, therefore, special calculations are required to back this amount out for hourly employees and/or consultants. In addition, 7.65 % must be added to hourly employee salaries to reflect the Commonwealth's share for social security.

That portion (all or part) of salaries for staff dedicated to maintaining and supporting an agency's distributed computing environment are included in Information Systems cost categories. Any portion of that staff not included in the IS cost categories should be included in the end user average salary calculations.

- **End User Surveys**

IS Staff shall not participate in the end user survey process. As appropriate, end users that perform some IS staff related functions in the Operations and Administration cost categories as part of their job should participate in the end user survey process.

SMS PROCEDURES FOR CONDUCTING TCO EVALUATIONS

The Seat Management Section uses the following steps for conducting initial TCO evaluations for small agencies:

ESTABLISH CONTACT WITH AGENCY

1. Contact agency head or key staff member to establish initial meeting date. TCO evaluation efforts should not be started or conducted without the full support of the agency head. **TCO's are not about IT, they are about the business of the agency and how IT supports that business.**
2. Develop an aggressive schedule for conducting the TCO evaluation that can be completed as scheduled by the Seat Management Section. Guidance – 2 weeks to complete all data collection, 1 week to review and analyze collected data and develop draft TCO evaluation report, 1 week for agency review of draft report, 2 days to finalize and deliver final report.
3. Prepare a proposed schedule (**USE TCO EVALUATION SCHEDULE**) and worksheets (hard copy and electronic format) for distribution at the initial meeting

INITIAL MEETING WITH AGENCY

1. Meet with the agency head and key business and/or IS staff
2. Establish the purpose of the TCO, its use and distribution
3. Develop and finalize the scope of the TCO evaluation
4. Provide an explanation of the expected results (use actual evaluation reports as examples)
5. Gain commitment of the agency head for the TCO evaluation, establish the key players for data collection, and finalize the TCO evaluation schedule. **(USE TCO EVALUATION SCHEDULE)**
6. Engage agency staff to gain an understanding of the agency mission and any particular circumstances that can/will/should affect the scope of the TCO evaluation.
7. Explain and review the data collection worksheets with the appropriate agency staff. This includes:
 - Worksheet 2 – Administration and Operations (interview form)
 - Worksheet 3 – End User Average Salary Calculations
 - Worksheet 4 – Inventory
 - Worksheet 4A –TCO Inventory Miscellaneous Expenses
 - Worksheet 5 – Best Practices
8. Explain the meaning of end users and IS staff. Collect an automated list of all agency staff including name, email address and telephone number.
9. Collect the following information through consensus of agency staff:
 - Company profile
 - Complexity
 - Complete initial cut of Worksheet 2. If possible identify agency staff for and get consensus on the amount of time devoted to the following cost categories:
 - o Operations (get estimated time breakouts by sub cost categories)
 - o Administration (Finance and Administration)
 - o Administration (End Use Training)
 - o Administration (IS Training)
 - o Identify vendors (if applicable) for the Operations cost category and/or any vendors used to provide End User or IS training

DATA COLLECTION AND VERIFICATION

1. Adjust initial proposed schedule as required

2. Transcribe Worksheet 2 related interview results into a revised Worksheet 2, identify remaining data collection needs associated with the Operations and Administration cost categories, and return the revised Worksheet 2 to the appropriate responsible person in the agency for completion of the data collection.
3. Set up Internet based survey file and survey instrument (at eGOV) to receive and process agency end user surveys.
4. Prepare and send memorandum to the agency head for distribution to appropriate agency staff for conducting the end user survey.
5. Set up additional appointments with agency staff as needed, including the collection of Best Practices information
6. Review all returned worksheets for reasonableness, completeness, and accuracy
7. Calculate and verify all needed totals on worksheets 2, 3, 4 and 4A.
8. Enter worksheet information into the TCO Manager software
9. When end user surveys are complete, import results into the TCO Manager software
10. Review the TCO Manager output data, graphs and reports for reasonableness, completeness, and accuracy.
11. As appropriate, meet with the responsible agency staff to verify the reasonableness, completeness, and accuracy of the data collected. Adjust data, collect additional information, and/or get all necessary clarifications.

ANALYSIS OF DATA AND DEVELOPING THE DRAFT REPORT

1. Review results of the end user survey to identify trends or potential areas that need to be addressed
2. Use audit report to identify opportunities for improvements or areas that may have been overlooked during the data collection process.
3. Review results of the five major cost categories and ensure all appropriate data was collected and entered into the correct cost categories.
4. Identify cost categories that require logical explanations for significant differences between the “typical” and “actual” costs
5. Develop the necessary logical explanations (SMS report template format)

6. Use identified opportunities, survey results, and complexity to identify strategies for improvement. Use the TCO Manager software's "target" modeling capabilities to determine the impact of implementing key strategies for improvement.
7. Develop draft TCO evaluation report using the standard SMS report format.
8. Submit draft report for SMS quality assurance review
9. Finalize draft report and deliver to agency head. Provide an overview of the results.

REVIEW AND FINALIZE THE DRAFT TCO EVALUATION REPORT

1. Meet with agency staff to discuss strategies for improvement and answer questions
2. Review agency concerns and/or agency recommendations for changes to the draft report.
3. Adjust the draft report as needed, and either finalize the report or deliver a revised draft report to the agency for review.
4. Finalize the report and deliver a color copy of the final report with a forwarding memorandum to the agency head. Provide the agency with electronic copies (PDF and MS Word format) of the final report.
5. Enter TCO metrics into the SMS database.

AGENCY TCO EVALUATIONS USING THIS MODEL

1. SMS staff is available to provide guidance, assistance, and advice to agency staff using this model.
2. Data collection worksheets are available on the Seat Management Section's web site at <http://www.seatmanagement.state.va.us>
3. The SMS TCO report template (MS Word format) is also available for downloading from the Seat Management Section's web site.
4. When an agency completes a TOC evaluation, an electronic copy of the final TCO report (PDF and MS Word format) should be provided to the Seat Management Section along with any required TCO metrics that may be established by COTS and the Secretary of Technology and an electronic copy of the TCO Manager software's ".gtm" file used to develop the report.

DRAFT

TCO PROJECT SCOPE STATEMENT

agency name

date

TCO SCOPE STATEMENT

All computing assets, user staff, IT resources, and costs collected for this study shall be limited to those directly related to using, supporting and maintaining the distributed computing environment for the *agency name*.

The following are scope criteria for this evaluation:

- The evaluation period is *beginning month/day/year* through ending *month/day/year*
- Physical counts (assets, end users, etc.) will be as of the last day of the evaluation period
- As appropriate, servers and administration and operations staff should be prorated across functional areas

The following are out of scope for this evaluation:

- Mainframes, mainframe applications, and mainframe only driven enterprise or departmental printers
- Internet web servers that serve customers external to *agency name*.

TCO Evaluation Schedule For (agency name)

Seat Management Sections Contacts –

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| <i>Data Collection Items (see TCO Distributed Computing Assessment TCO Survey)</i> | <i>Collection Process</i> | <i>Agency Contact Name /Phone/Email</i> | <i>Start Date</i> | <i>End Date</i> |
|--|--|---|-------------------|-----------------|
| Company Profile (1-18) | Interview Meeting Agency Staff list (see 1) | | | |
| Current Environment Assets (19 –27) Current Expenses (28 – 32) | SMS Worksheet 4 and 4A | | | |
| Operations Expenses (33 – 39) | Interview Meeting Worksheet 2 | | | |
| Administration Expenses (40 – 42) | Interview Meeting and Worksheet 2 | | | |
| Complexity (43 – 74) | Interview Meeting | | | |
| Best Practices (75) | Interview Meeting with IT staff and Worksheet 5 | | | |
| End-User Operations and Downtime (76 –77) # users and avg end user salary | SMS Worksheet 3 | | | |
| End-User Operations and Downtime (78 (1-42)) HTML end user survey | Internet on-line survey | | | |
| DRAFT TCO REPORT | Hardcopy color Draft Report from SMS | | | |
| Final TCO Report | Hardcopy color Report Plus PDF files of Report | | | |

- Provide a list of agency personnel with phone numbers and e-mail addresses.

**Commonwealth of Virginia
(agency name)**

**DEFINITIONS AND SMS INTERVIEW WORKSHEET
ADMINISTRATION**

This worksheet include staff resources for both salaried, hourly, and contract staff by Administration subcategory (Finance and Administration, IS Training and End User Training).

FINANCE AND ADMINISTRATION

Finance and Administration includes supervisory management, IS administrative assistance, asset management, budgeting and chargeback, auditing, purchasing, procurement and contract management, and vendor management personnel.

- Identify staff FTE and average annual salary by area (asset management, budgeting, auditing, purchasing, contract management, etc.
- Include supervisory management for oversight of all of the above

STEPS:

1. Identify those internal or external staff that perform these functions and the percent of time they spend on these type of tasks
2. Develop a consensus estimate on the amount of time those staff spent on the listed tasks in support of the organization's distributed computing environment as defined in the scope of the project
3. Obtain staff salary information as needed

| FUNCTION | STAFF NAME | % OF TIME PERFORMING TASK WITHIN SCOPE | STAFF SALARY |
|------------------|------------|--|--------------|
| Asset management | | | |
| Budgeting | | | |
| Procurement | | | |

| | | | |
|---------------------------------|--|--|--|
| Contract/vendor management | | | |
| Supervision of all of the above | | | |

IS TRAINING

IS Training includes both in-house and outsourced staff performing IS training course development, coordination, and instruction.

- Identify the in-house IT staff (# FTEs) and their average salary for all IS training developed and/or given by in-house IT staff. This will normally be zero for most small agencies.
- Identify the dollar amount for all outsourced training developed and provided to your in-house IT staff. This will normally be zero for most small agencies.

STEPS:

1. Determine if any IS training was provided to IT or end user staff during the evaluation period.
2. Determine if the IS training was provided by internal or external staff and complete the appropriate tables below
3. If internal staff was used, develop a consensus estimate on the amount of time those staff spent on the listed tasks in support of the organization's distributed computing environment as defined in the scope of the project
4. Obtain staff salary information as needed

INTERNAL STAFF IT TRAINING

| FUNCTION | STAFF NAME | % OF TIME PERFORMING TASK | STAFF SALARY |
|-----------------------|------------|---------------------------|--------------|
| IT Course Development | | | |
| IT Course Instruction | | | |
| | | | |

OUTSOURCED IT TRAINING

| FUNCTION | VENDOR NAME | TYPE TRAINING | COST |
|-----------------------|-------------|---------------|------|
| IT Course Development | | | |
| IT Course Instruction | | | |
| | | | |

END USER TRAINING

End User Training includes both in-house and outsourced staff performing end user training course development, coordination, and instruction.

- Identify the in-house IT staff (# FTEs) and their average salary for all end user training developed and/or given by in-house IT staff. This will normally be zero for most small agencies.
- Identify the dollar amount for all outsourced training developed and/or provided to your end user staff.

STEPS:

1. Determine if any within scope end user training was provided during the evaluation period.
2. Determine if the end user training was provided by internal or external staff and complete the appropriate tables below
3. If internal staff was used, develop a consensus estimate on the amount of time those staff spent on the listed tasks in support of the organization's distributed computing environment as defined in the scope of the project
4. Obtain staff salary information as needed

INTERNAL STAFF END USER TRAINING

| FUNCTION | STAFF NAME | % OF TIME PERFORMING TASK | STAFF SALARY |
|--------------------|------------|---------------------------|--------------|
| Course Development | | | |
| Course Instruction | | | |
| | | | |

OUTSOURCED END USER TRAINING

| FUNCTION | VENDOR NAME | TYPE TRAINING | COST |
|--------------------|-------------|---------------|------|
| Course Development | | | |
| Course Instruction | | | |
| | | | |

DEFINITIONS AND SMS INTERVIEW WORKSHEET OPERATIONS

Information about an organization's technical services, planning and process management, and service desk is collected and compiled. The information is used to calculate the Operations component of the Actual TCO.

Prior to being able to complete this section, you will need to collect the following information: (1) head count of IS Operations' personnel, (2) average salaries of these staff members, (3) activity allocation derived by distributing and collecting the IS Task Allocation Worksheets, and (4) outsourced management contracts.

INTERNAL OPERATIONS STAFF TABLE

STEPS:

1. List each internal IS or end user staff person that has organizational responsibility for any of the operations functions defined below.
2. By consensus determine the % of each listed persons time that will be allocated to supporting and maintaining the distributed computing environment as defined within the project scope.
3. Determine whether the person is a classified employee or an hourly employee and list the total compensation paid to this person during the evaluation period.

| STAFF NAME | CLASSIFIED OR HOURLY | % TO BE ALLOCATED TO THIS TCO PROJECT | STAFF SALARY |
|------------|-------------------------|--|--------------|
| | | | |
| | | | |
| | | | |
| | | | |

EXTERNAL OPERATIONS SUPPORT TABLE

1. List each outside vendor or external state agency that was contracted with to perform any of the operations functions defined below.

- 2. List the total amount paid to the vendor or external state agency during the evaluation period.**

| EXTERNAL VENDOR OR STATE AGENCY NAME | TOTAL AMOUNT PAID |
|--------------------------------------|-------------------|
| | |
| | |
| | |
| | |

INTERNAL AND OUTSOURCED OPERATIONS ALLOCATION TABLE

STEPS:

- 1. Identify those internal staff or external vendors that perform the listed functions and the percent of time or fees charged performing those tasks (see definitions after the table)**
- 2. Note 1: All internal staff time vendor total amounts paid identified in the tables above must be allocated for a total of 100% across the functions listed in this table. Example: If the table above specified that 50% of Employee A's total time is allocated to this project, then this table must specify how that time is spread across the operations functions listed. Employee A spends 50% of that time on Client Technical Services, 25% on Server Technical Services, and 25% on Network Technical Services.**

| OPERATIONS FUNCTIONS | STAFF NAME OR VENDOR NAME | STAFF EQUIVALENT FTE | VENDOR FEE OR COSTS |
|---|---------------------------|----------------------|---------------------|
| Technical Services Client Computers and Peripherals | | | |
| Technical Services Servers | | | |
| Technical Services Network Devices | | | |
| Process and Planning Management | | | |
| Database Administration | | | |
| Service Desk | | | |

Technical Services Client Computers and Peripherals

Include the costs of Operations staff performing any of the following Technical Services activities for client computers and peripherals: tier II problem resolution, tier III problem resolution, traffic management and planning, performance tuning, user administration (adds, moves, changes to users), operating system support, maintenance labor, software deployment, application management, hardware configuration/re-configuration, hardware deployment, disk and file management, storage capacity planning, backup archiving and recovery, and repository management.

Technical Services Servers

Include the costs of Operations staff performing any of the following Technical Services activities for servers: tier II problem resolution, tier III problem resolution, traffic management and planning, performance tuning, user administration (adds, moves, changes to users), operating system support, maintenance labor, software deployment, application management, hardware configuration/re-configuration, hardware deployment, disk and file management, storage capacity planning, backup archiving and recovery, and repository management.

Technical Services Network Devices

Include the costs of Operations staff performing any of the following Technical Services activities for network devices: tier II problem resolution, tier III problem resolution, traffic management and planning, performance tuning, user administration (adds, moves, changes to users), operating system support, maintenance labor, software deployment, application management, hardware configuration/re-configuration, hardware deployment, disk and file management, storage capacity planning, backup archiving and recovery, and repository management.

Planning and Process Management

Include the costs of Operations staff performing any of the following Planning and Process Management activities: account management, systems research, planning and product management, evaluation and purchase, security and virus protection, and business recovery.

Database Management and Administration

Include the costs of Operations staff performing Database Management and Administration. Administrative tasks include index management, replication, log administration, data recovery, optimization, and other maintenance tasks. Excluded in this category are design and development related activities which are allocated to the Development category.

Service Desk

Include the costs of Operations staff performing Service Desk activities including tier 0 and tier I only.

Tier 0 refers to call taking and logging without providing problem assistance or resolution. Tier I refers to first and second level non-dispatched problem assistance or resolution delivered via phone, e-mail or on-line communication.

Tier II and Tier III support is allocated to Technical Services in the Operations category.

End User Average Salary Calculations

Organization contract person and phone -**Instructions Classified/Salaried Employees**

1 - List all classified/salaried employees in Column A. Include the agency head with the classified/salaried employees.

2 - Compute each classified/salaried employee's annual salary. This should be the actual gross salary paid the employee for the evaluation period or the employee's annual salary amount as of the last day of the evaluation period. (Note use one method or the other, do not combine actual gross salary paid with annual salary amounts)

3 - If actual gross salary paid was used in "2" above, set all "# FTEs" (column E) equal 1.00. If the annual salary amount as of the last day of the evaluation period was used in "2" above, complete the Column E (# FTEs) for each listed employee. Use "1.00" for all employees that were present for the whole evaluation period, and use some percentage of an FTE for those employees that only worked part of the evaluation period (new hires, retired, resignations, etc.).

4 - Sum the amounts paid in Column F.

| CLASSIFIED/SALARIED EMPLOYEES | | | Annual Salary | # FTEs (.10 - 1.00) | Amount Paid |
|-------------------------------|--|---------|---------------|------------------------|-------------|
| Employee A | | | \$40,000 | 1.00 | \$40,000 |
| Employee B | | EXAMPLE | \$36,000 | 1.00 | \$36,000 |
| Employee C (retired June 30) | | | \$50,000 | 0.50 | \$25,000 |
| | | | | Total | \$101,000 |
| | | | | | |
| CLASSIFIED/SALARIES EMPLOYEES | | | Annual Salary | # FTEs (.10 - 1.00) | Amount Paid |
| 1 | | | | | \$0 |
| 2 | | | | | \$0 |
| 3 | | | | | \$0 |
| 4 | | | | | \$0 |
| 5 | | | | | \$0 |
| 6 | | | | | \$0 |
| 7 | | | | | \$0 |
| 8 | | | | | \$0 |
| 9 | | | | | \$0 |
| 10 | | | | | \$0 |
| | | | | Total | \$0 |

End User Average Salary Calculations*Instructions Hourly (P14) Employees or Contractors*

1 - List all hourly employees followed by contractors that are counted as end users in Column A.

2 - Compute Column D (Amount Paid) using one of the following:

- List the hourly rate each listed employee/contractor was paid in Column B and the corresponding number of hours worked during the evaluation period in Column C. Complete Column F by multiplying the hourly rate in Column B times the number of hours worked in Column C.

or

- List the actual gross amount paid to the employee during the evaluation period in Column F

3 - Sum the amounts in Column F.

| HOURLY EMPLOYEES | Rate/Hour | Hours Worked | | | Amount Paid |
|-------------------|--------------|----------------|--|--------------|-----------------|
| <i>Employee D</i> | <i>10.00</i> | <i>1000.00</i> | | | <i>\$10,000</i> |
| <i>Employee E</i> | <i>9.30</i> | <i>500.50</i> | | | <i>\$4,655</i> |
| | | | | <i>Total</i> | <i>\$14,655</i> |

| HOURLY EMPLOYEES | Rate/Hour | Hours Worked | | | Amount Paid |
|------------------|-----------|--------------|--|--------------|-------------|
| 1 | | | | | \$0.00 |
| 2 | | | | | \$0.00 |
| 3 | | | | | \$0.00 |
| 4 | | | | | \$0.00 |
| 5 | | | | | \$0.00 |
| 6 | | | | | \$0.00 |
| 7 | | | | | \$0.00 |
| 8 | | | | | \$0.00 |
| 9 | | | | | \$0.00 |
| 10 | | | | | \$0.00 |
| 11 | | | | | \$0.00 |
| | | | | <i>Total</i> | <i>\$0</i> |

Hourly unburdened

\$0

End User Average Salary Calculations

| CONTRACTORS (END USERS) | Rate/Hour | Hours Worked | | | Amount Paid |
|-------------------------|-----------|--------------|--|-------|-------------|
| Contractor 1 | 25.20 | 1725.00 | | | \$43,470 |
| Contractor 2 | 39.50 | 900.00 | | | \$35,550 |
| | | | | Total | \$79,020 |

| CONTRACTORS (END USERS) | Rate/Hour | Hours Worked | | | Amount Paid |
|-------------------------|-----------|--------------|--|-------|-------------|
| | | | | | \$0.00 |
| | | | | | \$0.00 |
| | | | | | \$0.00 |
| | | | | | \$0.00 |
| | | | | | \$0.00 |
| | | | | | \$0.00 |
| | | | | | \$0.00 |
| | | | | Total | \$0 |

Seat Management Section Calculation Notes

Note 1 - P14 hourly employees = (amount paid) x 1.0765 (state SSN) / 1.28

Contractor unburdened

\$0.00

Note 2 - contractors = (total amount paid) / 1.28

Note 3 - Notes 1 and 2 remove the burden rate for P14s and contractors that is added back by the software

Note 4 - Total End Users - count of the individuals shown in column A for salaried employees, and the number of full time equivalents for hourly employees and contract

Total End Users = 0 Unburdened end user avg salary #DIV/0!

[illegible]

Evaluation Period (start - end)

[illegible]

[illegible]

Evaluation Period (start - end)

[illegible]

| SERVER SOFTWARE | | | | | | | | | | | |
|--|---------------------------|--|---|-----|--|------------------|--|--------------------------|---------------|------------------|---|
| Annualized capital expenditures on new and upgraded server software. Server software includes operating systems, utilities, business applications, e-mail, GroupWare, communications, and connectivity. Included are commercial applications, and shrink wrap software. Site licenses or select agreements are typically capitalized over the duration of the agreement. Software that is licensed under an annual subscription is recorded as an annual expense. If a maintenance or support agreement exists on a software license, and the main purpose of the agreement is to obtain updates and upgrades, the cost for the maintenance/support agreement should be recorded here. If the agreement is for technical support, or the support portion can be allocated, record that portion in Operations. Software that is resident on a server but used by clients or is difficult to allocate cost wise between servers and clients should be allocated to the client software category. Do not include the cost of IS software in this section. | | | | | | | | | | | |
| Software Function | | | | | | | | | | | |
| Business/Engineering - Annualized expenses for all server executing applications and application foundations including financial, accounting, enterprise resource planning, technical design, or other vertical applications, business software, and server based applications. Client based applications that reside on servers should have costs allocated under client software. | | | | | | | | | | | |
| Database/Data Management/Development Tools - Annualized expenses for all server database licenses. Include the costs for database utilities, data mining, business intelligence tools and report writers that run on production servers. Do not include the costs of application software that uses these databases. Do not include the costs of IS software. | | | | | | | | | | | |
| Messaging/Groupware - Annualized expenditures on new and upgraded e-mail, GroupWare and collaboration software. Specify the server component of the costs only. Do not include the cost of IS software in this section. | | | | | | | | | | | |
| Other - Annualized expenditures for new and upgraded server executing software not included in the categories above e.g. NOS. Do not include the cost of IS software in this section. | | | | | | | | | | | |
| Server Functions | | | | | | | | | | | |
| File - Servers providing basic file and print sharing services to users. Personal productivity applications are often run from these servers. | | | | | | | | | | | |
| Application - Servers that are primarily used to execute business applications or store large amounts of data accessed by applications. Example - Oracle Server. | | | | | | | | | | | |
| Email - Servers that primarily provide these services. Example Web server, Post Office Server, Lotus Notes server. | | | | | | | | | | | |
| Utility - Would include infrastructure servers - Example - Domain server. | | | | | | | | | | | |
| | Software name (list each) | | Software Function (Business, Database, Messaging, Other) | QTY | Server Function (File, Application, Email, Utility) | Production or IS | | Server Purchase Month/Yr | Cost per unit | TCO Expensed Amt | Comments (identify any maintenance fees and timeframes here) |
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| Calculate Annual TCO Expensed Amt for server software as follows: (QTY x Cost per unit) divided by 5 (years) | | | | | | | | | | | |
| Total server software costs equals the sum of the Annual TCO Expensed Amt for all server software calculated above | | | | | | | | | | | |

[illegible]

TYPE SOFTWARE

Other - Annualized expenses for all software that does not fit into the categories above e.g. operating systems and utilities. Do not include the costs of IS software.

[illegible]

Total client software costs equals the sum of the Annual TCO Expensed Amt for all portable and desktop units calculated above

[illegible]

EXPENSE DEFINITIONS AND WORKSHEET

Upgrades, Spares/Spare Parts and Supplies

SERVERS

Upgrades - Hardware upgrades for servers are the annualized expenses for various hardware improvements made to servers, including hard drives, processor, memory, network connectivity, removable media, uninterruptible power supplies. Such upgrades were not included in the original purchased bundle.

| Description | Amount | Allocate amount to File/Print, Application/Database, Email/Groupware, and Utility/Comm/Other |
|-------------|--------|--|
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Spares/Spare Parts - The annualized expenses for spare server components including disk drives, processors, motherboards, network connectivity, removable media devices, and other components.

Do not include the cost of a hot spare server, include the hot spares in server expense, depreciation or lease.

The spare parts charge in maintenance contracts should be allocated to this category.

| Description | Amount | Allocate amount to File/Print, Application/Database, Email/Groupware, and Utility/Comm/Other |
|-------------|--------|--|
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Supplies - The annualized expense for server related consumables such as diskettes, programmable CD-ROMs, backup tapes, removable media and any other computer supplies for servers.

This fee does not include toner or paper for printers that are server attached.

| Description | Amount | Allocate amount to File/Print, Application/Database, Email/Groupware, and Utility/Comm/Other |
|-------------|--------|--|
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CLIENTS (DESKTOPS AND PORTABLES)

Upgrades - Hardware upgrades for clients are the annualized expenses for various hardware improvements made to clients, including hard drives, processor, memory, network connectivity, removable media, and uninterruptible power supplies. Such upgrades were not included in the original purchased bundle.

| Description | Amount | Allocate Amount between Desktops and Portables |
|-------------|--------|--|
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Spares/Spare Parts - The annualized expenses for spare client components including disk drives, processors, motherboards, network connectivity, removable media devices, and other components.

Do not include the cost of a hot spare client, include the hot spares in client expense, depreciation or lease.

The spare parts charge in maintenance contracts should be allocated to this category.

| Description | Amount | Allocate Amount between Desktops and Portables |
|-------------|--------|--|
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Supplies - The annualized expense for client-related consumables such as diskettes, programmable CD-ROMs, backup tapes, removable media and any other computer supplies for clients.

This fee does not include toner or paper for printers that are client-attached.

| Description | Amount | Allocate Amount between Desktops and Portables |
|-------------|--------|--|
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PERIPHERALS

Upgrades - Hardware upgrades for peripherals are the annualized expenses for various hardware improvements made to peripherals, including peripheral memory, network connectivity, removable media, uninterruptible power supplies. Such upgrades were not included in the original purchased bundle.

| Description | Amount | Allocate Amount to Personal Printers/Plotters, Dept/Enterprise Printers, and Other Peripherals |
|-------------|--------|--|
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Spares/Spare Parts - The annualized expenses for spare peripheral components.

Do not include the cost of a hot spare peripheral, include the hot spares in peripheral expense, depreciation or lease.

The spare parts charge in maintenance contracts should be allocated to this category.

| Description | Amount | Allocate Amount to Personal Printers/Plotters, Dept/Enterprise Printers, and Other Peripherals |
|-------------|--------|--|
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Supplies - The annualized expense for peripheral related consumables such as toner, writable CD-ROMs, and any other supplies for peripherals.

This fee does not include paper for printers.

| Description | Amount | Allocate Amount to Personal Printers/Plotters, Dept/Enterprise Printers, and Other Peripherals |
|-------------|--------|--|
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NETWORK DEVICES

Upgrades - Hardware upgrades for network devices are the annualized expenses for various hardware improvements made to network devices. Such upgrades were not included in the original purchased bundle.

| Description | Amount |
|-------------|--------|
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Spares/Spare Parts - The annualized expenses for spare network device components.

Do not include the cost of a hot spare network device. Include the hot spares in network device expense, depreciation or lease.

The spare parts charge in maintenance contracts should be allocated to this category.

| Description | Amount |
|-------------|--------|
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| | |

Supplies - The annualized expense for network device related consumables.

| Description | Amount |
|-------------|--------|
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IS HARDWARE AND SOFTWARE

IS Hardware is hardware that primarily supports an IS process and not a business or user process. Examples are test and training devices, and help desk consoles. Devices used by IS personnel for personal productivity functions would not be considered IS hardware.

For the IS hardware (servers, clients, peripherals, and network devices) specified in the Current Environment - Assets questionnaire, specify the annualized capital expenses.

Specify the costs according to the function served by the IS hardware.

Upgrades - Hardware upgrades for clients are the annualized expenses for various hardware improvements made to clients, including hard drives, processor, memory, network connectivity, removable media, uninterruptible power supplies. Such upgrades were not included in the original purchased bundle.

| Description | Amount |
|-------------|--------|
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| | |

Spares/Spare Parts - The annualized expenses for spare client components including disk drives, processors, motherboards, network connectivity, removable media devices, and other components.

Do not include the cost of a hot spare client, include the hot spares in client expense, depreciation or lease.

The spare parts charge in maintenance contracts should be allocated to this category.

| Description | Amount |
|-------------|--------|
| | |
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Supplies - The annualized expense for client related consumables such as diskettes, programmable CD-ROMs, backup tapes, removable media and any other computer supplies for clients.

This fee does not include toner or paper for printers that are client attached.

| Description | Amount |
|-------------|--------|
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WORKSHEET #5

(AGENCY NAME) TCO BEST PRACTICES

Gartner Group Best Practices

Check All Applicable Best Practices in use on
last day of evaluation period

Technology Improvements - Asset Management

1. Automated Asset Management
2. Software Inventory
3. Hardware Inventory
4. Automated Software Distribution

Technology Improvements - Systems Management

1. Virus Detection and Repair
2. Systems Management
3. Server Based Client Image Control
4. User State Management and Restore

Technology Improvements - Managed PC

1. Unattended Power Up
2. Client Hardware Event Management
3. Low Impact Upgradeability

Technology Improvements - Scalability

1. Scalable Architecture
2. Low Risk, High Quality Vendor/Provider Selection

Technology Improvements - Business Protection

1. Fault Tolerance
2. Automated Backup and Restore
3. Hardware Physical Security Management

Technology Improvements - Service Desk

1. Service Desk Problem Management and Resolution
2. Client Remote Control

Process Improvements - User Management

1. Enterprise Policy Management
2. Locked User Environment
3. Data Security Management
4. Change Management

Process Improvements - Standardization

1. Vendor Standardization
2. Platform Standardization
3. Application Standardization
4. Centralized and Optimized Procurement

Process Improvements - Practice Management

1. More Time Spent Planning Versus Implementing
2. Service Level Tracking and Management
3. Capacity Planning
4. TCO Lifecycle Management

People Improvements

1. User Training
2. IS Training
3. IS Staff Highly Motivated
4. Stable IS Organization

Terms and definitions for TCO Best Practices and contained in Attachment B of the DRAFT
TCO Guidelines <http://www.seatmanagement.state.va.us/documents/TCOGuidance.html>